TECHNICAL BOOK REVIEW INDEX

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ANTHONY A. MARTIN, *Editor*

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THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Allen, James S.

Neutrino. 176p. 1958. Princeton Univ. Press, Princeton, N. J., $4.50. (Investigations in physics, no.5.)

Physics today, Nov. 1958, p.36, 38. 1⅔ col.

"The language of the book is sober and factual. There is sufficient theory to give unity and a feeling for the objectives sought by all of the investigations, but the text is at its best when it deals with the experiments. As one reads successively about the various measurements that have informed us about the neutrino, one cannot avoid being struck by the ingenuity that has been shown. The account is in a way an incidental history of the development of laboratory skills." *Arthur H. Snell.*

Scientific American, Nov. 1958, p.160. ¼ col.

"A progress report of the investigations through May, 1958, of this member of the proliferating family of particles of nuclear physics. Wolfgang Pauli postulated the existence of the neutrino in 1931; Enrico Fermi made immediate use of the concept in his theory of beta-decay. Then, when the theory appeared to be complete, the work of C. N. Yang and T. D. Lee in 1957 reopened it by suggesting studies of processes which involve the neutrino or antineutrino. These investigations have turned up new facts, and it likely that research in this direction will continue to be fruitfully pursued for some time to come."

Alter, Dinsmore.

Introduction to the moon. 108p. 1958. Griffith Observatory, P. O. Box 27787, Los Angeles, $1.65 unbound.

Sky and telescope, Oct. 1958, p.647. 1⅛ col.

"A small book that should be of special interest to all amateur astronomers, from beginners to dyed-in-the-wool selenographers. Unquestionably this is the best illustrated of any recent popular works on the moon . . . Much of the text is a simply written, thoughtful survey of the different types of surface formations, such as maria, walled plains, crater pits, and domes. A good deal of this material previously appeared in a series of articles by Dr. Alter in the *Publications* of the Astronomical Society of the Pacific. Other chapters tell briefly the history of selenography, about tides, and the potential uses of an observatory on the moon . . . Easily the best general account of our satellite in popular language. It can be regarded as complementing the Wilkins and Moore book, which is rich in topographical description, but weak in its summarizing chapters." *J. A.*

Andree, Richard V.

Selections from modern abstract algebra. 212p. 1958. Holt, New York, $6.50.

Journal of the Association for Computing Machinery, Oct. 1958, p.393. ¼ p.

"A pleasantly written discussion of modern algebra . . . No attempt at thoroughness is made. Instead, the author merely wants to 'whet the student's appetite'. He does this rather effectively . . . The faults are minor . . . A fine book for the purpose enunciated and would prove useful and interesting to the non-specialist interested in 'discovering' modern algebra." *M. P. Epstein.*

Aseltine, John A.

Transform method in linear analysis. 340p. 1958. McGraw, New York, $8.50.

Electrical journal, Oct. 31, 1958, p.1236. ½ col.

"Essentially an engineering book and most of the mathematics is presented from the engineer's point of view . . . Among many excellent features, special mention may be made of the use of transforms for treating difference equations, the unified approach to all classes of linear systems through the transform method, and the relations between the many methods of describing such systems. The book is at senior graduate level, but it should be just as acceptable to engineers in practice as a refresher text." *S. A. S.*

Electrical manufacturing, Nov. 1958, p.314. ½ col.

"Prime purpose of this senior-graduate-level text is to show what the transform method is and how it is applied to a variety of engineering problems. More importantly, it shows how the transform method can give an understanding of physical phenomena. Considerable space is devoted to the concepts of system function, frequency response, impulse response, etc. Material related to the analysis of linear systems is brought together and the relationships between the various methods are shown."

Asinger, F.

Chemie und Technologie der Monoolefine. 997p. 1957. Akademie, Berlin, DM 67.

Chemist, Nov. 1958, p.498. ⅛ col.

"Probably the most valuable single source for up-to-date information on the chemistry and technology of mono-olefins. Of special interest to industry chemists are the chapters on the principles and their practical application to the manufacture of carburettor fuel, chlorinated hydrocarbons, and synthetic materials such as alcohols, lubricants, caoutchouc, etc. With this work, author and publisher have performed a distinct service to the chemical profession." *Rudolph Selden.*

Auslander, Lee.

Domestic oil burners and oil heat. 245p. 1958. Rinehart, New York, $6.95 unbound.

Air conditioning, heating and ventilating, Nov. 1958, p.146. ⅓ col.

"Unusual in that it employs a patented feature by which the illustrations and tables are in one portion of the book, text in another, so arranged that an illustration or table and related text can be followed simultaneously, without turning pages . . . Written to satisfy the need for practical, down-to-earth approach to the subject of oil burners and their application . . . Every chapter is written in simple, non-theoretical style, and is said to have been tested under shop conditions for eight years."

Balabanian, Norman.

Network synthesis. 444p. 1958. Prentice-Hall, Englewood Cliffs, N. J., $12.

Electronic equipment engineering, Oct. 1958, p.92. ¼ col.

"The major portion . . . is devoted to the realization problem; that is, finding a suitable network given the driving point or transfer function. General one-port and two-port networks are treated in full prior to the realization discussion. A section is included on insertion-loss synthesis, and the concluding chapter introduces the topic of approximation in network synthesis. Illustrative techniques . . . as well as ample diagrams and problems, make this clearly written book an excellent, self-contained treatment."

Bamford, C. H., and others.

Kinetics of vinyl polymerization by radical mechanisms. 318p. 1958. Academic Press, New York, $8.80.

British journal of applied physics, Oct. 1958, p.404. ¼ col.

"An able and critical survey of the field. Its main emphasis is on the principles that are applied to the analysis of the kinetics of free-radical polymerizations, and on the results that have been obtained, rather than on detailed experimental techniques. The last chapter is mainly mathematical and discusses the distributions of such properties as molecular weight, and composition in copolymers. References are plentiful. Most polymer chemists will find something of interest in this book, and to some it will be a valuable work of reference. An author index, however, would have enhanced its value." *P. A. Small.*

British plastics, Oct. 1958, p.449. ⅞ col.

"An up-to-date account of the fundamental researches in this field and is presented as a unified but critical survey rather than an exhaustive summary . . . One of the best and most reliable accounts of the subject yet published and can be warmly recommended. Since it is written for students interested in polymer and free radical chemistry and also for industrial chemists who wish for an up-to-date account of the fundamentals, it is a pity that the price is so high." *C. E. H. Bawn.*

Barnes, D. E., & Taylor, Denis.

Radiation hazards and protection. 178p. 1958. Newnes, London, 30s. net.

Nuclear engineering, Nov. 1958, p.506. ⅝ col.

"A comprehensive survey of a subject on which, hitherto, information has been generally rather diffuse, and it covers the ground in a thorough and workmanlike fashion, right from the nature and properties of radiation, its units, and its effects on the human system . . . There is a certain amount of overlapping between sections; this has been deliberately done so that any chapter contains all the relevant information on the subject. Constants and formulæ, a bibliography, and an index are included."

Nuclear power, Nov. 1958, p.565. ½ col.

"This book is complementary to *Radioisotope Laboratory Techniques* (*Faires and Parks*) issued by the same publishers . . . While the latter dealt with the techniques and the good housekeeping aspects of safe handling of radioactive substances, the former concerns itself primarily with the instrumentation and measurements necessary for radiation control . . . Together, these two books provide a nearly complete code of practice for the safe use of radioactive materials and radiating devices, such as X-ray equipment, accelerators etc."

Bendat, Julius S.

Principles and applications of random noise theory. 431p. 1958. Wiley, New York, $11.

Electronic industries, Nov. 1958, p.50. ¼ col.

"A systematic development of fundamental topics, explaining the basic ideas of random noise analysis and optimum filtering techniques in understandable terms. Physical meanings and mathematical restrictions are emphasized . . . . Especially written for use by research scientists and the practicing engineer."

Missiles and rockets, Oct. 6, 1958, p.55. ⅛ col.

"Will be of interest to those in the fields of statistical communication theory, systems analysis, automatic control, meteorology, aeronautics, radar, product testing, and other re-

lated studies. Principles of random noise analysis and optimum filtering techniques are explained, with emphasis on physical meanings and mathematical restrictions. The author shows how to formulate difficult noise problems, how to solve them mathematically, and how to draw appropriate physical designs and interpretations."

Bisplinghoff, Raymond L.

Finite twisting and bending of heated elastic lifting surfaces. 114p. 1958. Verlag Leeman Zürich, $4.75 unbound.

Aircraft engineering, Oct. 1958, p.318. 2 col.

"An important study of the elastic behaviour of thin wings subjected to non-linear temperature gradients and particularly valuable are the numerous experimental results which confirm, in general, the theoretical predictions . . . The analysis is very well presented, but the author attaches only secondary importance to the comments on the results, which are restricted to formal descriptions of the curves without references to the physical phenomena responsible for the characteristic behaviour of heated wings in large deformations." *S. L. K.*

Bogert, Lotta Jean.

Fundamentals of chemistry. Ed.8. 615p. 1958. Saunders, Philadelphia, $5.50.

Journal of chemical education, Nov. 1958, p.584. ⅓ col.

"While this new edition includes some of the more recent chemical developments, it is rather seriously lacking in the most recent fundamental concepts . . . Should be a pleasure for students using it to read each chapter, but it is not geared to college-level thinking. Even though the courses in which it may be used are terminal there is still too shallow a presentation of basic chemical principles . . . Compares more favorably with current high school chemistry textbooks." *Sister Mary Martinette.*

Bohr, Niels.

Atomic physics and human knowledge. 101p. 1958. Wiley, New York, $3.95.

American journal of physics, Nov. 1958, p.596. 1⅛ col.

"Excellently written . . . Aids in securing a fundamental epistemological understanding of atomic structures and contributes to an understanding of other disciplines . . . Can be read with profit by all physicists and chemists and should be valuable in the training of graduate and undergraduate majors in physics and chemistry. With the possible exception of the Einstein essay, laymen can read the book with profit and understanding." *Waldemar Noll.*

New scientist, Oct. 16, 1958, p.1076. 2⅓ col.

"Six of the seven articles . . . are lectures delivered between 1932 and 1955 on the repercussions of the fundamental principles of atomic physics on those of biology, psychology and sociology. They are addressed to scientifically and philosophically minded laymen and can be understood and appreciated without any more than an elementary knowledge of physics." *Reinhold H. Fürth.*

Bonnar, Robert U., and others.

Number-average molecular weights. 310p. 1958. Interscience Publishers, New York, $7.50.

Chemical and engineering news, Oct. 6, 1958, p.136. 1½ col.

"A sound, detailed account of methods, experimental procedures, and statistical treatment of data covering the whole range of number-average molecular weights from less than 100 to greater than 500,000. The emphasis throughout is industrial rather than academic, except where the nature of the sample requires a more detached approach . . . The questions the authors attempted to answer were: the method to use for a given problem, the advantages, limitations, reliability, range of molecular weight covered, systematic errors involved, and interferences. The detailed experimental and calculational procedures should enable any investigator to increase the reliability of his data." *J. B. Nichols.*

Booth, Kathleen H. V.

Programming for an automatic digital calculator. 238p. 1958. Academic Press, New York, $7.50.

Control engineering, Oct. 1958, p.153. ⅓ col.

"Basically, this book is a text for beginners in digital computer programming. The author begins by briefly describing APEXC, an All-Purpose Electronic X-ray Calculator installed at Birkbeck College, London . . . The second chapter presents an overall picture of the programmer's function . . . Programming for division and square root, and the preparation of miscellaneous subroutines, are covered in two chapters . . . Subsequent chapters cover techniques for programming miscellaneous, non-mathematical processes, as well as matrix operations, simultaneous linear equations, mechanical translation, interpretive processes, and, to a limited extent, automatic programming."

Proceedings of the IRE, Nov. 1958, p.1886. 1⅔ col.

"The book's greatest value seems to be in the presentation of a few highly specialized techniques for computing certain functions wherein full advantage is taken of the detailed binary nature of the computer . . . Definitely not a 'must' for any computing installation, but it could prove at least occasionally interesting if not useful to the programmer interested in using refined techniques in certain applications." *Donn Combelic.*

Bovey, Frank A.

Effects of ionizing radiation on natural and synthetic high polymers. 287p. 1958. Interscience Publishers, New York, $8.

Record of chemical progress, Sept. 1958, p.167. 1⅔ col.

"Well organized and seemingly complete . . . Written in a lucid, logical fashion . . . Stimulating because of its critical comments both on polymer chemistry and on the radiation chemistry involved. Consistent with its title, the book does not cover the fields of polymerization or graft copolymerization induced by ionizing radiation . . . Can be recommended without reservation to all workers interested in this new and exciting field." *R. F. Boyer.*

Bowen, R. N. C.

Exploration of time. 144p. 1958. Newnes, London, 21s.

Discovery, Oct. 1958, p.438. 1⅝ col.

"The book is not technical; within a limited space it covers too wide a range of subjects for that purpose. It is essentially a popular review of the methods of measuring cosmic and prehistoric time, as well as of the major processes and succession of events in the cosmic past . . . The information is mostly correct [but] not always up to date. Numerous well-devised illustrations are of great help. The subject is fascinating, and the reader will get a fair picture of what is going on in the exploration of the past." *E. J. Opik.*

Bower, John, & **Schultheiss,** P. M.

Introduction to the design of servomechanisms. 510p. 1958. Wiley, New York, $13.

Electronic equipment engineering, Nov. 1958, p.90. ¼ col.

"A basic book on the design of servomechanisms requiring no previous background other than a knowledge of linear circuit theory and some understanding of linear differential equations. The authors provide a systematic approach to design, dealing with the principal performance requirements . . . An attempt is made to treat the synthesis problem on a basis that permits the specifications on performance, given components, and noise to be handled at the same time."

Briggs, Hilton M.

Modern breeds of livestock. Revised edition. 754p. 1958. Macmillan, New York, $8.50.

Agricultural Institute review, Sept.-Oct. 1958, p.36. ½ col.

"In this latest edition the author discusses the origin and development of the various breeds of livestock and evaluates each breed as impartially as is humanly possible . . . A separate chapter is devoted to the new breeds of beef cattle and special attention is given to the American Landrace and inbred breeds of swine and to the Debouillet breed of sheep. On the other hand, discussion on the various breeds of draft horses has been reduced from three chapters to one. This edition is otherwise similar to the earlier one in content and in manner of presentation." *G. K. Macleod.*

British Commonwealth welding conference, 1957. 469p. 1958. Institute of Welding, London, 105s.

New scientist, Oct. 16, 1958, p.1078. 1 col.

"The complete content and discussion of some 60 separate papers is presented . . . Topics cover practically all aspects of welding technology from metallurgical problems associated with welding the newer and rarer industrial metals to quantity production problems, from reviews of techniques in a particular industry to the training and control of welders. Reviews of the use of welding in specific industries are contributed by a dozen authors including several from overseas, notably Canada." *C. E. Turner.*

Welding and metal fabrication, Nov. 1958, p.415. ⅛ col.

"The objects of the Conference were to exchange information on the present technical position of the welding processes and their main applications within the Commonwealth, and to consider means of improving the flow of technical information about welding . . . A further object was to emphasize the importance of the contribution which welding can increasingly make to the development of modern engineering production."

Brunklaus, J. Henri.

Industrieofenbau. 304p. Vulkan Verlag, Dr. W. Classen, Essen, Germany, DM 46.

Coke and gas, Oct. 1958, p.437. ¾ col.

"The treatment of the physics and thermodynamics of furnace design and operation is essentially adapted to the requirements of the practical engineer. Involved theoretical derivations and complicated formulae are consistently avoided. Numerous worked examples of calculations are given. Thanks to the wide range of subject-matter dealt with and the author's direct and straightforward approach to the problems involved, the designer of industrial furnaces will find this well composed book a useful addition to his library."

Bussard, R. W., & **DeLauer,** R. D.

Nuclear rocket propulsion. 370p. 1958. McGraw, New York, $10.

Aero/space engineering, Nov. 1958, p.119. ⅛ col.

"A comprehensive picture of a pioneer field of nuclear power application which is expected to supplant conventional chemical propulsion as a thrust-producing device, at least for vehicle missions involving heavy payloads and long ranges . . . By joining nuclear reactor technology to the characteristics of rocket-motor gas dynamics and the inherent features of ballistic-rocket-vehicle flight, they afford the physicist, the engineer, and the designer an insight into the requirements and future possibilities of advanced, high-performance nuclear propulsion systems."

Carr, Clifford C.

Electric machinery. 573p. 1958. Wiley, New York, $9.25.

Machine design, Sept. 18, 1958, p.245. ¼ col.

"Types of construction used in ac and dc machines, transformers, and dynamos are covered . . . Divided into two sections, the first part of the book includes topics such as types of windings, voltage relations, magnetic-field relations, energy losses, energy flow, efficiency, ratings, and basic torque relations. The remainder . . . deals with the application of these principles and relations to the analysis of machine performance."

Caunter, C. F.

History and development of light cars. 120p. 1957. H. M. Stationery Office, London, 8s. 6d.

Automobile engineer, Oct. 1958, p.396. ⅛ col.

"Some thousands of individual designs of widely varying sizes, forms, and technical details, have contributed to the evolution and development of the light, simple and economical motor car as it exists today. The book under

review is, perhaps, the first to deal comprehensively with the history of this development . . . Presents the more important places of evolution of the light car during the first 60 years of its commercial production and general use. Although the story is necessarily curtailed, the aim has been at presenting a broad and connected survey."

Chamberlain, Joseph Miles, & **Nicholson,** T. D.

Planets, stars and space. 223p. 1957. Creative Educational Soc., Mankato, Minn., $7.50.

Sky and telescope, Nov. 1958, p.40. ⅔ col.

"Astronomy with a minimum of text and mathematics is the theme of this book . . . The authors . . . use pictures to very good effect. Almost all of the right-hand pages are full-page illustrations of astronomical views through large telescopes, pictures of observatories and instruments, or charts and diagrams to accompany the text . . . Each page is a unit, on some specific topic related to the facing picture. With the aid of the comprehensive index, the reader can turn to any subject and find the answers to specific questions, or can study one or more sections as time and inclination permit." *Edward J. Newman.*

Churchill, Ruel V.

Operational mathematics. Ed.2. 337p. 1958. McGraw, New York, $7.

Aero/space engineering, Oct. 1958, p.115. ⅛ col.

"An extensive revision of *Modern Operational Mathematics in Engineering,* published in 1944. The operational properties of the Laplace transformation are followed in a natural manner by the operational mathematics for various Fourier transformations and their generalizations and by the theory and applications of eigenvalue problems . . . Applications are chiefly to problems in engineering and physics that involve differential equations, with emphasis on boundary value problems in partial differential equations. Discussions include problems in vibrating mechanical systems, electric circuits, and servomechanisms, involving systems of ordinary differential equations."

Cockrell, William D., ed.

Industrial electronics handbook. 1408p. 1958. McGraw, New York, $22.50.

Electrical manufacturing, Nov. 1958, p.314. ⅓ col.

"With some 100 authors contributing, this handbook, covering all phases of industrial electronics and control, will be a valuable aid to technicians in many fields as well as the control engineer . . . Emphasis is on application and the user's needs, rather than on the specialized information required by the designer of particular components."

Electronic technician, Oct. 1958, p.65. ⅛ col.

"This impressive handbook—practically an encyclopedia—should be the permanent reference work in the libraries of advanced technicians and engineers. The wealth of data contributed by over 100 leading authors is imposing indeed."

Constant, Frank Woodbridge.

Theoretical physics, thermodynamics, electromagnetism, waves and particles. 364p. 1958. Addison-Wesley, Reading, Mass., $7.50.

American journal of physics, Nov. 1958, p.598. 1 col.

"The bulk of the book is devoted to electromagnetism and it is here that the true purpose of the book reveals itself most clearly—it is primarily a book *about* fundamental physical laws and *not* so much about the methods of extracting information from the laws, i.e., of solving problems . . . Although one may argue that this perhaps gives a somewhat distorted view of theoretical physics, within this framework Professor Constant has done his job well." *S. T. Epstein.*

Proceedings of the Physical Society, Oct. 1, 1958, p.679. 6 l.

"Consists of a notably clear presentation of the basic elementary theory of electromagnetism (150 pages) 'topped up' with some *very* elementary thermodynamics, statistical mechanics, physical optics, special relativity and wave mechanics, all treated (if you please) in a further 200 pages. Needless to say this is not really theoretical physics, but parts of the book may be found useful by undergraduates during their first two years." *R. O. Davies.*

Cruess, W. V.

Commercial food and vegetable products. Ed.4. 884p. 1958. McGraw, New York, $15.

Food engineering, Oct. 1958, p.169. ⅔ col.

"Designed primarily as a text book for college lecture courses, this book can also serve as a useful reference on principles and production methods for canners, freezers, juice producers, preservers, and other food processors . . . New material in this . . . Edition includes aseptic canning, steam flow closure of cans, liquid sugar, new products from surplus, sterilization by irradation [sic], high temperature—short-time sterilization, low temperature vacuum concentration of fruit juices, and the reuse of water in canneries."

Cruse, Kurt, & **Huber,** Reinhard.

Hochfrequenztitration. 198p. 1957. Verlag Chemie, Weinheim, Germany, DM 22.

Analytical chemistry, Nov. 1958, p.60 A. ⅛ col.

"Sets forth the theory and principles of high frequency titrations. The significance of this method as applied to chemical analysis is described, and techniques for measurement and instrument usage are included . . . Contains 152 illustrations, an extensive list of literature references, and a subject index."

Das, T. P., & **Hahn,** E. L.

Nuclear quadropole resonance spectroscopy; supplement 1 to Solid state physics. 223p. 1958. Academic Press, New York, $7.

Journal of applied physics, Oct. 1958, p.1515. ⅛ col.

"Divided into three main sections; theory, instrumentation, and applications of interest to solid state. Derivations of the most frequently occurring Hamiltonians are given, line widths are discussed on the basis of both

static interactions and internal motions, and transient experiments are gone into in some detail. General methods as well as specific circuitry are considered in the section on instrumentation. The applications section includes information obtained by this technique on crystal structure, electron distribution in free molecules, intermolecular binding in the solid state, and the effects of impurities . . . Well sprinkled with 269 references to the literature."

Demers, Pierre.

Ionographie; les émulsions nucléaires. 835p. 1958. Univ. of Montreal Press, Montreal, Canada, $20.

Science, Oct. 24, 1958, p.998. 2½ col.

"*Ionographie* (which deals with the self-inscription of the path of fast charged nuclear particles traversing photographic emulsions) can be said to be the first comprehensive work on this important tool of modern nuclear physics . . . Physicists will find this volume useful in making range-energy measurements, evaluating particle momentum by multiple scattering techniques, and making charge identification by grain and delta-ray counting . . . A greatly needed, authoritative work on the use of photographic emulsions in nuclear physics." *Herman Yagoda.*

Dumesnils, Danloux.

Le calcul analogique par courants continus. 265p. 1958. Dunod, Paris, 2850 fr.

Proceedings of the IRE, Oct. 1958, p.1771. ⅔ col.

"The major criticism one is forced to direct at the book stems from the author's fanatic preoccupation with language, which often borders on a chauvinism unworthy of the universality of science . . . On the whole, however, the book is well suited to serve as an introductory textbook to the analog field. In the hands of the engineer, it should provide an equally valuable introduction into the nature and potential of an art which the engineer cannot afford to ignore." *Berthold Lippel.*

Dungey, J. W.

Cosmic electrodynamics. 183p. 1958. Cambridge, New York, $6.

British journal of applied physics, Oct. 1958, p.398. ½ col.

"Covers in an elegant and straightforward fashion the physics of motion of highly ionized matter under the influence of electromagnetic fields. Dr. Dungey's special interest is towards the galactic and solar applications, and his book can be strongly recommended to any student of this subject. A considerable part of the book, however, is also applicable to students of plasma physics in the laboratory, and is greatly to be welcomed." *P. M. S. Blackett.*

Nuclear physics, Oct. 1958, p.394. ½ p.

"Emphasis is decidedly theoretical: the general theory is developed with great elegance in the first half . . . and then successively applied to the origin of the cosmic radiation, solar phenomena . . . magnetic storms and aurorae, and the ionosphere. Although the empirical data are only quoted to the extent required for the theoretical analysis, enough is said to convey a clear idea of the physical processes involved in these phenomena." *L. R.*

Ettinger, George M.

Magnetic amplifiers. Ed.2, revised. 102p. 1957. Methuen, London, 9s. 6d.

Journal of the Institution of Electrical Engineers, Sept. 1958, p.512. ⅜ col.

"A comprehensive but necessarily shallow survey of the whole field . . . Backed up by a detailed and up-to-date bibliography of nearly 140 references. The book will therefore be most useful to the circuit designer who has to use magnetic amplifiers occasionally, and wants to find his way quickly to the right literature reference. The student will find the book a readable introduction to the subject, burdened with a minimum of mathematics; but the magnetic-circuit specialist will be disappointed by the lack of coherent quantitative design information, although the book contains a mass of detailed facts."

Evans, Rupert N., & **Porter,** C. B.

Experimental basic electronics. 104p. 1958. McKnight, Bloomington, Ill., $3.

Popular electronics, Nov. 1958, p.36. 8 l.

"An excellent basic text which contains 18 step-by-step experiments as well as theory. Each experiment includes a list of equipment, a schematic drawing and a photograph of the layout of parts, a word description, and questions for study. *Recommended*: to beginners in electronics as a good starting point."

Fassbender, Heinrich.

Einführung in die Messtechnik der Kernstrahlung und die Anwendung der Radioisotope. 223p. 1958. Thieme, Stuttgart, Germany, $8.85.

Nuclear power, Nov. 1958, p.565. ½ col.

"Very well produced and profusely illustrated this book provides an introduction to the measurement and application of radioactive isotopes . . . Divided into four principal sections dealing respectively with an introduction to nuclear processes, the measurement of the radiations, the applications of radiation and radioactive isotopes and radiation protection. The treatment is brief and in the third of these sections barely suffices to give a clear conception of the principles of some important applications." *A. G. Maddock.*

Science, Oct. 24, 1958, p.1000. ⅛ col.

"Presents in five chapters a clear and compendious introduction to radioisotope techniques. Emphasis is on the German development (about 65 of the 75 references deal with German publications). Thus, the book provides an interesting reflection on the present status of German science in this important field and, at the same time, is useful to the student." *A. T. Krebs.*

Feinstein, Amiel.

Foundations of information theory. 137p. 1958. McGraw, New York, $6.50.

Journal of the Acoustical Society of America, Oct. 1958, p.994. ⅛ col.

"The author's purpose is to set forth in one place the present state of the mathematics of the subject. His book is entirely mathematical, being concerned with the general properties of communication channels of various types. There are no references to practical applications. The communications engineer will, however, find it to his advantage to be aware of the funda-

mental theorems provided in this brief treatise." *R. B. Lindsay.*

Telephony, Nov. 1, 1958, p.47. ⅜ col.

"So far, there has been no single reference book to which an interested person could turn for an up-to-date and complete presentation of the subject. This book was written to help fill this gap. It assumes no previous knowledge of information theory . . . and goes into the subject from the beginning. A knowledge of elementary probability theory is necessary for an understanding of this book as is a working knowledge of college level mathematics."

Fischer, Heinz, & **Mansur,** L. C., ed. Conference on extremely high temperatures. 258p. 1958. Wiley, New York, $9.75.

Industrial laboratories, Oct. 1958, p.61. ⅓ col.

"Based on the Conference on Extremely High Temperatures held March 18-19, 1958, in Boston, this book is a summary of the underlying basis for commercial or usable thermonuclear reactions. Emphasis is on high temperatures as they relate to the propulsion fields, with sub-emphasis on the physics of the topics covered."

Nuclear power, Nov. 1958, p.564. ½ col.

"The papers come from laboratories not directly concerned with the AEC project so the book cannot hope to give a complete picture of the state of high temperature research. It deals rather with a limited number of topics, each of which is of considerable interest in what might be called the lower range of the high temperature scale, that is up to about half a million degrees. The range of the topics is, however, very wide." *A. B. Robson.*

Flagg, Arthur L. Mineralogical journeys in Arizona. 93p. 1958. The Author, P. O. Box 2345, Phoenix, Ariz., $3.95.

Earth science, Oct. 1958, p.12. ⅓ col.

"A highly valuable contribution to all collectors interested in the minerals, and the mineral collecting fields and localities of . . . Arizona . . . Contains the first complete list of minerals of Arizona, also many colored pictures of rare minerals, and an interesting and authoritative section upon old abandoned mines, and mineral locations, not to be found elsewhere."

Frenkel, J. I. Prinzipien der Theorie der Atomkerne. 201p. 1957. Akademie, Berlin, DM 26.

Nuclear physics, Oct. 1958, p.395. ⅓ p.

"Reproduces in almost the original form a course of lectures given at the Leningrad Polytechnic in 1947 . . . In spite of the book's being written before the great advances in the understanding of nuclear structure of the last ten years, the treatment seems fresh and interesting even now . . . Will probably appeal most to the undergraduate near the end of his course, to whom it should serve as a good introduction to more recent works. He will find his interest maintained throughout." *A. Herzenberg.*

Gardner, Martin. Logic machines and diagrams. 158p. 1958. McGraw, New York, $5.

New scientist, Oct. 30, 1958, p.1172. 1 col.

"A logic diagram displays the role of logic in discussion and helps to solve logical problems. Its relation to symbolic logic is the same as that between geometry and algebraic geometry. Mechanical or electrical logic machines aim at doing the same thing much faster. They should appeal to us as their structure illustrates the presuppositions of a discussion rather than its substance. Certainly I found this book very interesting as it takes us through their history from Ramon Lull in the thirteenth century to the present day as well as giving the author's own ideas." *G. J. Kynch.*

Product engineering, Nov. 24, 1958, p.109. ⅜ col.

"A complete survey of mechanical and electrical machines designed to solve problems in formal logic, and of geometrical methods for doing the same thing . . . Much of the material is published here for the first time . . . Future applications of logic machines to such fields as operations research, information storage and processing, and efficient circuit designing, are outlined and discussed."

Gelbtuch, A. See **Solodovnikov,** V. V., and others.

General Electric Company — Semiconductor products department. Transistor manual. Ed.3, revised. 168p. The Company, Syracuse, N. Y., $1 unbound.

Electronic technician, Oct. 1958, p.65. ⅛ col.

"104 pages are devoted to applications, including circuits and construction information for amplifiers, hi-fi, radio, power supplies switching, etc. Specifications, tetrode transistors and silicon controlled rectifiers are also presented. Here is up-to-date data of real value to electronic specialists."

Radio & TV news, Nov. 1958, p.133. ⅓ col.

"Contains a wealth of information which will be of interest to circuit designers, hobbyists, and experimenters. Three early chapters cover basic semiconductor theory, transistor construction techniques, and biasing while the balance . . . is devoted to specific and practical applications of transistors . . . Those with a more-than-casual interest in transistors and transistor circuitry will enjoy and profit by a serious perusal of this manual."

Grabbe, Eugene M., and others, ed. Handbook of automation, computation and control. 3v. v.1: Control fundamentals. 1020p. 1958. Wiley, New York, $17.

Electronic equipment engineering, Nov. 1958, p.90. ¼ col.

"This *Handbook,* pertaining to the field of automatic control, is designed to provide a source of definitions and descriptive material about new areas of technology in automation and to serve as a reference and as background material for understanding modern techniques of importance in the field . . . Preparation of the series is by a staff of specialists recruited from industry and the various universities."

Factory management and maintenance, Nov. 1958, p.212. ⅜ col.

"The publisher's blurb says the handbook 'provides an elementary frame of reference for the novice and advanced data for the expert.' We'd take that with a grain of salt. If it means the novice among technical specialists, OK. But even the definitions and descriptions at the start of each chapter would be rather sticky to the man who is a complete stranger to the field. For technical personnel at all levels, however, this is a tremendously useful book, both as working tool and reference."

Graubard, Mark.

Foundations of life science. 627p. 1958. Van Nostrand, Princeton, N. J., $6.50.

School science and mathematics, Oct. 1958, p.580. ⅜ col.

"Designed for orientation of college students who do not major in science, this book does not make the usual division of biology into botany and zoology, but treats the various topics found in biology text, in the words of the author, 'in a manner which cuts across the plant and animal kingdoms.' The author does this well, citing examples from both the plant and animal worlds . . . Very little 'basic' material has been omitted and the book could well serve even in a one semester introductory course for majors." *Leo C. Vander Beek.*

Grivet, P., and others.

Optique électronique. 3v. v.2. 339p. 1958. Centre National de la Recherche Scientifique, Paris.

Physics today, Oct. 1958, p.36. 1⅝ col.

"The present volume, concerning . . . microscopes, diffraction cameras, mass spectrographs, and cathode-ray tubes should interest anyone who uses, or is considering the use of, any of these instruments as well as the active workers in the field of electron physics . . . The authors' long association with a working electron-physics laboratory shows everywhere in pointing up difficulties of technique, disagreement between theory and practice, and personal opinions based on firsthand experience as to preferred solutions to common problems. It is pleasant to be able to feel from a book that the author is an expert in his field and does not have to rely on his reputation no matter how distinguished or well deserved." *J. Arol Simpson.*

Hammond, Rolt.

Dispersion of materials. 229p. 1958. Philosophical Library, New York, $10. (Physical processes in the chemical industry, v.2.)

British chemical engineering, Nov. 1958, p.632, 634. ⅞ col.

"An excellent general review of crushing and grinding, classification, fluidisation, flotation, liquid dispersion, the dispersion of gases and atmospheric pollution . . . A very readable book with many attractive features. Modern units of equipment are described in detail along with typical applications . . . To the chemical engineering student, this text will give a valuable insight into the construction and use of the equipment described. To the experienced engineer, it will give a useful overall picture of modern developments in this field." *R. Hendry.*

Journal of the Oil and Colour Chemists' Association, Nov. 1958, p.815. ⅜ p.

"Consists of a collection of unsystematic, incomplete and superficial comments on various matters more or less related to the title . . . [Succeeds] in confusing simple issues and oversimplifying complex ones . . . Cannot be recommended."

Harvey, Alfred A. B.

Paint finishing in industry. 516p. 1958. R. Draper, Ltd., 85 Udney Park Rd., Teddington, Middlesex, England, $12.

Materials in design engineering, Nov. 1958, p.220. 11 l.

"Concerned with the paint finishing of metal and wood products, this book gives information on surface preparation, pretreatments, sanding, polishing, lining, flock finishing and silk screen printing. A number of chapters are devoted to the finishing of automobile bodies, refrigerators, machinery and castings. Paint testing is covered in detail. British and U. S. paint specifications are given."

Metal finishing journal, Oct. 1958, p.410. 1⅛ col.

"Performs a valuable function in bringing together information on pretreatment, application and stoving by all methods currently in use, and although not attempting to provide an authoritative treatise on points themselves it does provide a useful survey of the general types of finishing materials which are available and their individual properties, advantages and disadvantages . . . Can be recommended as a useful survey."

Hausner, Henry H., ed.

Modern materials. v.1. 402p. 1958. Academic Press, New York, $12.50.

Product engineering, Oct. 20, 1958, p.35. ⅜ col.

"First of a series planned to provide the designer with up-to-date information he needs. If the current volume is typical, it will certainly succeed in its aim. Indeed, the only criticism of this book might be that it is a bit ahead of date. Several materials, described as though they were fully commercial, are, in fact, still experimental. Materials covered, in separate chapters, each written by an expert in the field, are synthetic rubber, fibers, insulation papers, ceramics, semiconductors, zirconium and wood." *A. R. G.*

Hausner, Henry H.

Powder metallurgy in nuclear engineering. 275p. 1958. American Society for Metals, Cleveland, $8.50.

American metal market, Oct. 10, 1958, p.7. ⅛ col.

"Should prove of major reference value to engineers and students of this advanced stage of metals technology . . . Fifteen chapters range from general metallurgical problems in the design of nuclear reactors through the safe handling of pyrophoric and radioactive metal powders. Powder metallurgy of zirconium, uranium, thorium, beryllium and various alloys are discussed, as are metal powders, preparation for reactors, ceramic fuel materials and related topics. There are 243 literature references and 100 charts, tables and graphs."

Hesse, Walter J.

Jet propulsion. 567p. 1958. Pitman, New York. $9.75.

Aero/space engineering, Oct. 1958, p.116. ¼ col.

"The purpose of the book, which evolved from courses given at the Naval Air Test Center, Patuxent River, Md., is to present a balanced treatment of the subject of jet propulsion in which the chief emphasis is placed on principles of operation, and concepts are developed from fundamental engineering laws rather than from an equation standpoint. A working knowledge of calculus, physics, thermodynamics, and aerodynamics or fluid mechanics is required to comprehend the material in the text, which also contains a wide selection of assignment problems, solutions, and pertinent appendixes."

Hintenberger, H., ed.

Nuclear masses and their determination. 267p. 1957. Pergamon, London, 84s.

British journal of applied physics, Oct. 1958, p.398. ½ col.

"Proceedings of a conference held in July 1956 at the Max Plank Institute for Chemistry, Mainz, Germany . . . The papers are largely concerned with the experimental techniques and instruments constructed for this field of research. It is an authoritative publication, containing a wealth of practical information which will be invaluable to mass spectroscopists and nuclear physicists concerned with the problems of mass measurement." *G. H. Palmer.*

Hochrainer, A.

Symmetrische Komponenten in Drehstromsystemen. 346p. Springer, Berlin, DM 45.

Electrical journal, Oct. 24, 1958, p.1167. ⅘ col.

"The necessity for this book was the non-availability of any suitable text on symmetrical components in the German literature . . . The book does not compare favourably with works available in the U.K. There is a serious lack of numerical examples in the text, and there are no examples for solution. In view of Dr Hochrainer's lecturing experience, this is rather surprising. There are also several serious omissions of content." *G. S. B.*

Holm, R.

Elektrische Kontakte. Ed.3. 522p. Springer, Berlin, DM 52.50.

Electrical journal, Oct. 24, 1958, p.1166. ½ col.

"Treatment is methodical and complete . . . Divided into three main sections, dealing with stationary contacts, sliding contacts, and switching contacts, respectively. As distinct from many discussions on the subject, there is no mere statement of facts in isolation, but a logical development . . . A very good book, and one that is well worth adding to the private library of any practising electrical engineer. Nobody pretends it is the last word on a subject which is still in a state of rapid development, but it is a very secure starting-point." *G. S. B.*

Humphrey, Watts S., jr.

Switching circuits with computer applications. 264p. 1958. McGraw, New York, $8.50.

Electrical journal, Oct. 31, 1958, p.1236. ⅖ col.

"The book is in ten chapters covering an introduction to the subject, Boolean algebra, relay contact networks, codes, minimising aids, circuit logic, Boolean matrices, bilateral networks, cascaded networks and sequential networks. A bibliography and index are given . . . Intended as a graduate engineering text and as an aid to the systems design engineer, and to such it can well be recommended. By computer designers, in particular, is the book well worth careful study. Illustrations, mathematical setting, and printing accord with the publisher's usual high standard." *S. A. S.*

Instrument review, Oct. 28, 1958, p.1065. ⅖ col.

"[The author] presents some important techniques used in computer design problems and enough theoretical material to enable the student to understand and apply new methods as they become available. The theoretical basis for the work is concerned with mathematical techniques for the design of networks and systems of networks composed of elements like switches. The main text deals with Boolean algebra with applications to the design of some relay networks . . . As much mathematical foundation work as possible has been included and there are many examples and diagrams."

Jaffe, Bernard.

Chemical calculations. Ed.3. 180p. 1958. World Bk., Yonkers, N. Y., $2.

Journal of chemical education, Oct. 1958, p.529. ⅖ col.

"Represents little more than a reprinting of the original text, now more than 30 years old. The major changes involve new ererpts [sic] from the Regents and College Board examinations. With the exception of these two revisions and minor changes in the tables of chemical prices, atomic weights, and in the discussion of subatomic particles, this third edition is almost identical to the second edition." *Fred B. Eiseman, jr.*

Jefferson, Sidney, ed.

Handbook of the atomic energy industry. 270p. 1958. Newnes, London, 35s. net.

Nuclear engineering, Nov. 1958, p.506. ⅖ col.

"The expression 'birds-eye view' has been used so often that one hesitates to use it except when, as in the present instance, it appears inevitable. The task of giving the background to nuclear energy in the short space of a book this size is by no means easy, and the editor and his 12 contributors have taken a great deal of trouble to make its 19 sections as representative as space will allow."

Karrer, W.

Konstitution und Vorkommen der Organischen Pflanzenstoffe. 1207p. 1958. Birkhäuser, Basel, Switzerland, DM 136.

Chemical age, Oct. 18, 1958, p.651. 1 col.

"Over 2600 entries are contained in the volume, some of which refer to compounds which do not themselves occur in nature . . . Compounds whose complete constitution has not yet been established, are excluded. The literature has been examined up to the end of 1956 and, on the whole, the coverage is excellent. A valuable feature is the inclusion of products

from moulds and bacteria, which are perhaps even more versatile in their chemistry than the higher plants . . . A most useful reference book." *Peter Schwarz.*

Kistemaker, J., and others, ed.

Proceedings of the international symposium on isotope separation. 704p. 1958. Interscience Publishers, New York, $15.

Industrial laboratories, Nov. 1958, p.75. ⅜ col.

"In the past decade there have been several small conferences on this subject. But none of these conferences afforded a medium for a general discussion of the principles and the application of the many different methods of isotope separation. The Proceedings of this outstanding and well organized symposium provided the exchange of information on an international scale among scientists working in this field."

Science, Oct. 3, 1958, p.769. ⅘ col.

"The first broad international conference in this field was held in Amsterdam in April 1957. The papers presented there have been compiled into an excellent reference volume, nicely balanced between theory and practice. Many of those most actively engaged in isotope separation are among the contributors. Sixty-three papers are included; most of them in English, a few are in French and German . . . Will be happily received by all those interested in or engaged in isotope separation. Such a complete compilation of papers in this area may not appear again for many years." *C. P. Keim.*

Kittel, C.

Elementary statistical physics. 237p. 1958. Wiley, New York, $8.

Electronic industries, Oct. 1958, p.62. ⅛ col.

"A fundamental and modern achievement of statistical mechanics, including stochastic processes and transport theory. Throughout the presentation, the Gibbs method of ensembles is used, with detailed discussion of its application. Problems and examples are given which are applicable to many scientific fields—nuclear physics, electrical engineering, solid state physics, metallurgy, and chemistry—and are presented in a simple, clear and in understandable manner."

Koch, J., ed.

Electromagnetic isotope separators and applications of electromagnetically enriched isotopes. 314p. 1958. Interscience Publishers, New York, $7.50.

British journal of applied physics, Oct. 1958, p.397. ¾ col.

"By the nature of things only a small number of physicists or engineers will ever be required to design or to operate electromagnetic separators. The chapter on the application of isotopes on the other hand may appeal to a very wide circle of scientists. But the book may be recommended also to those who have no professional connexion with electromagnetic separators or isotopes, because it tells in a masterly way the fascinating 'success story' of a physical instrument which has grown into a giant." *D. Gabor.*

Journal of applied physics, Nov. 1958, p.1614. ⅛ col.

"The authors have presented this work on the assumption that the use of electromagnetic isotope separators would be stimulated if there were more general knowledge of the methods and of the uses of enriched isotopes . . . Intended to serve as an introduction for the potential worker in the field of electromagnetic separators and as a guide for the physicist who has to decide whether to establish a separator group in his laboratory."

Korshenewsky, N. V., & Runge, W. T., ed.

Lehrbuch der drahtlosen Nachrichtentechnik. Ed.3, revised. 456p. Springer, Berlin, DM 58.50.

Electrical journal, Oct. 17, 1958, p.1094. ⅜ col.

"Divided into three main sections, comprising: Elementary electrotechnology and physics; the motion of electrons in electro-magnetic fields; and practical electronic tubes, data and characteristics . . . It is difficult to assess the value of such a book to the English reader; it will to an over-riding extent be determined by the language difficulty. This apart, however, the work provides a welcome and unusual combination of theory and practice." *G. S. B.*

Kosack, Hans Joachim, & Wangerin, A.

Electrotechnik auf Handelsschiffen. 482p. Springer, Berlin.

Electrical journal, Oct. 24, 1958, p.1166. ½ col.

"Deals in detail with a very restricted theme, that of power equipment in merchant ships. By intention, the treatment is descriptive, there is hardly a formula or equation in the whole thing . . . Includes . . . full descriptive details of practically all types of a.c. and d.c. power equipment likely to be encountered on board ship . . . Even so there are some fantastic omissions . . . Probably of great interest to German engineers employed in dockyards or in shipbuilding." *G. S. B.*

Laatsch, W.

Dynamic der mitteleurropäischen Mineralböden. Ed.4. 280p. 1957. Steinkopff, Darmstadt, Germany.

Soil Science Society of America proceedings, Sept.-Oct. 1958, p.469. 1 col.

"Dr. Laatsch's book well fulfills its purpose of providing an account of the recent achievements in the field of soil science, particularly those pertinent to soil colloids and moisture relations, and it is to be recommended to soil specialists as well as students of advanced standing. Both the contents and the unusually clear language make this text admirably well suited for students who have to fulfill their graduate language requirements." *S. A. Wilde.*

Landau, Lev D., & Lifshitz, E. M.

Statistical physics; translated from the Russian by E. Peierls and R. F. Peierls. 484p. 1958. Pergamon, London, 80s. (Course of theoretical physics, v.5.)

Journal of nuclear energy, Sept. 1958, p.326. 1 p. including another review.

"The chapters are the basic principles of statistical physics, thermodynamic quantities, the Gibbs distribution, the perfect gas, the

Fermi and Bose distributions, condensed bodies, real gases, phase equilibrium, solutions, chemical reactions, the properties of matter at very high temperatures and densities, fluctuations, the symmetry of macroscopic bodies, second-order phase transitions and surfaces . . . The principal criticism that the present reviewer would make . . . is that in certain cases the explanations are better for a student who is already familiar with the subject than for one whose first knowledge comes through these books." *N. F. R.*

Lasley, Sidney J., & **Mudd,** M. F.

New applied mathematics. Ed.5. 457p. 1957. Prentice-Hall, Englewood Cliffs, N. J., $3.48.

School science and mathematics, Oct. 1958, p.582. ⅔ p.

"The amount of material presented is more than adequate for a one year course in general mathematics; hence, the teacher may handle a wide range of abilities by the selection of appropriate topics. Individual differences are also provided for by grading exercises into three levels of difficulty, and by offering optional exercises . . . Most of the topics presented appear to have been chosen for their practical value to the student . . . It is the opinion of the reviewer that this textbook should be considered by anyone interested in a book for use in a high-school course in general mathematics." *J. Bryce Lockwood.*

Leavell, Stuart, & **Bungay,** Stanley.

Standard aircraft handbook. Ed.2. 160p. 1958. Aero Publishers, Inc., Los Angeles, $2.75.

Aero/space engineering, Nov. 1958, p.120. 10 l.

"Twenty-eight major aircraft factories and material suppliers have assisted in the preparation of this pocket-size reference and training manual for aircraft workers and mechanics in factories and maintenance companies. The subjects dealt with are riveting, bolts and fasteners, tools and their proper use, assembly and installation methods, materials and fabrication, blueprint reading, lofting and templates, and the most common AN standard parts."

Levell, D. A.

Pulse and time base generators. 175p. 1958. Pitman, London, 25s.

Electronic engineering, Oct. 1958, p.616. ½ col.

"The book is, perhaps, rather too condensed to meet fully the needs of students but this could be remedied in a second edition. It would also add to its value as a reference book, if the symbols used in each mathematical exposition could be defined. This would mean some repetition but would save time. The book is excellent and the author is to be congratulated upon it . . . Will prove very valuable and can be highly recommended." *O. S. Puckle.*

Libois, L. J.

Faisceaux hertziens et systèmes de modulation. 512p. 1958. Chiron, Paris, 6200 fr.

Electronic engineering, Oct. 1958, p.616. 1 col.

"Deals with the fundamental problems in the design of line-of-sight radio links for multi-channel telephony, telegraphy and television, describing in particular the various systems of modulation. Tropospheric scatter communication is specifically excluded, but readers are directed towards suitable information on this subject . . . Will be of value to a specialist in radio-link work who is able to use a mathematical approach to produce answers adaptable to engineering requirements." *G. L. Grisdale.*

Proceedings of the IRE, Nov. 1958, p.1886. ⅜ col.

"Purpose of the author is to present in one book the basic principles connected with the modern design of radio link . . . Text is very clear, concise, and easy to read. All lengthy demonstrations are reported in annex at the end of each chapter, which is followed by a succinct bibliography, mostly limited to recent publications." *J. B. Lair.*

Little (Arthur D.), **Incorporated.**

Flavor research and food acceptance. 391p. 1958. Reinhold, New York, $10.

Canadian chemical processing, Oct. 1958, p.76. ¼ col.

"Considers what physiologists and psychologists have found out about the bases and importance of taste and smell; what chemists know of the chemical aspects of flavor; what market research knows of consumer wants; and what methods are used in sensory flavor analysis . . . Useful to everyone involved in the food industry. The importance of flavor to the competitive aspect of the industry establishes this book as one of the more significant books on food."

Industrial hygiene digest, Oct. 1958, p.7. ⅛ p.

"This book representing the contributions of a number of authorities, is of primary interest to food processors, but it contains information on odor examination that can be applied also in the field of odors in air pollution. Of particular interest in that connection are chapters on: physiological basis of flavor; behavorial responses to taste and odor stimuli; sensory difference tests; time-intensity studies; presentation of odor samples; physicochemical concentration of odors; prerequisites for test environment; application of statistics in odor testing; odor evaluation of petroleum products; and potentialities of physicochemical separation in the flavor field."

Malcolm, John.

Elementary surveying. Ed.2, revised and rewritten by Arthur E. North. 280p. 1958. University Tutorial Press, London, 12s. 6d. net.

Surveyor, Oct. 25, 1958, p.1032. ⅜ col.

"There are many good text-books on surveying, but there is always room for one published at a low price combined with high quality, and eminently suitable for self instruction. In the writing, illustrating, printing and production, this book deserves the warmest praise . . . Still lays stress on work likely to be carried out in estate management, and has some particularly instructive notes on the Ordnance Survey, road-making, estate boundaries, land drainage, and other subjects commonly met with in county practice." *C. W. C.*

Mansur, L. C. See **Fischer,** Heinz, & **Mansur,** L. C., ed.

Martin, Louis C., & **Johnson,** B. K.
Practical microscopy. Ed.3. 138p. 1958. Blackie, Glasgow, 12s. 6d.

Industrial chemist, Oct. 1958, p.575. ⅛ col.

"In revising the text for this edition it has been attempted to indicate modern trends both in the design of microscopes and also in techniques; at the same time the outline 'remains severely practical.' The 14 chapters range from 'Magnification,' devoted to the fundamental principles of the subject, to 'The Electron Microscope' in which this advanced instrument is described."

Mason, P., & **Wookey,** N., ed.
Rheology of elastomers. 202p. 1958. Pergamon, London, 50s.

British journal of applied physics, Oct. 1958, p.400. ¼ col.

"Contains the papers, and discussions on them, read at a conference organized by the British Society of Rheology . . . Apart from three theoretical papers which are of wide application, the contributions are reports of experimental work on a specific property of one material. The substances studied included rubber, gelatine, polythene, Terylene and irradiated polymers . . . Provides a summary of experimental techniques and data which could be useful to other workers with this class of materials." *C. C. Mill.*

Mason, Warren T.
Physical acoustics and the properties of solids. 414p. 1958. Van Nostrand, Princeton, N. J., $9.

Electronic industries, Oct. 1958, p.58, 62. ½ col.

"This introduction to the uses of wave transmission in solids provides both engineering applications and analytical uses under one cover. Every attempt has been made to present underlying physics as simple as possible, and with a minimum of mathematics, in order that the diversity of possible applications be available to many scientists of varied professional backgrounds. Part 1 thoroughly covers basic principles and engineering applications . . . Part 2 deals in considerable detail with the analytical uses of sound wave propagation."

Massey, Harre S. W., & **Boyd,** R. L. F.
Upper atmosphere. 333p. 1958. Hutchinson, London, 63s.

New scientist, Oct. 23, 1958, p.1125. 1 col.

"This particular treatise . . . possesses original virtues of its own, which entitle it to a very special place in any scientific library. Indeed, there is no other work in this field which is, at the same time, as authoritative and up to date. The authors have declared their own objective to be to write a book 'for students, for scientists in other fields who require a reliable outline of the subject, and for those technically interested in space travel.' This objective has certainly been attained." *Edward V. Appleton.*

Maurin, J.
Les piles atomiques à neutrons lents. 197p. 1958. Dunod, Paris, 980 fr.

British journal of applied physics, Oct. 1958, p.404. ⅛ col.

"An introduction to the physics of thermal neutron reactors . . . Consists of more detailed mathematical analysis than is necessary for the beginner in the field though the practising reactor engineer or physicist may find a need to refer to the standard works on the subject . . . Does not discuss in detail the implications of the results derived, the limitations of the methods used, and the important experimental aspects of the subject." *J. J. Syrett.*

Millman, Jacob.
Vacuum-tube and semi-conductor electronics. 644p. 1958. McGraw, New York, $10.

Electrical journal, Oct. 24, 1958, p.1166. ½ col.

"There are numerous textbooks available dealing with either vacuum tubes or semiconductor devices, but as far as the reviewer knows this is one of the first attempts to link the two together in one textbook. That this is a logical step is obvious when one stops to think, since the theory of both is very similar, and their applications overlap. Furthermore, the similarities and differences in characteristics can the more easily be brought out . . . This book with its lucid exposition is a 'must' for the electronics engineer."

Moment, Gairdner B.
General zoology. 632p. 1958. Houghton, Boston, $7.50.

Nature magazine, Nov. 1958, p.504. ½ col.

"Written by a scientist of distinction, experienced in general text work, who displays remarkable ability in selecting and organizing material; presents it with authority and charm. Includes latest findings in all fields . . . A fascinating book, certainly among the top two or three now current."

Science, Oct. 17, 1958, p.893. 1⅛ col. including another review.

"Moment uses the popular two-column format and appeals to the eye-minded with handsomely presented photographs and diagrams in abundance . . . Stresses the liberal-arts approach for purposes of making a zoological contribution toward a general education; it bids informally for student interest and points to the relationship between methodology, new discoveries, and economic applications." *Lorus J. Milne & Margery Milne.*

Naylor, Joseph L., & **Saunders,** T. F., ed.
Handbook of the aircraft industry. 341p. 1958. Newnes, London, 35s.

New scientist, Oct. 9, 1958, p.1020. ⅜ col.

"This handbook may have a relatively short period of authenticity, but it is probably the best survey of the industry produced since the end of the war, sound in its fact, remarkably up to date, comprehensive in the service it offers both as a reference book and a source of information about entry into the industry, and lucid as a work prepared by Mr. Naylor might be expected to be." *E. Colston Shepherd.*

Newton, K., & **Steeds,** W.
The motor vehicle. Ed.6, revised. 684p. 1958. Iliffe, London, 45s.

Automobile engineer, Oct. 1958, p.395. ⅜ col.

"A standard work, primarily for students of automobile engineering, but it is also most

useful as a work of reference for practising engineers. In the latest edition, some 80 pages have been added, and the entire book has been thoroughly revised . . . So far as possible, non-technical language is used and mathematics have been largely excluded . . . A sound text book of automobile design practice."

Nichols, J. E.

Livestock improvement. Ed.4. 240p. 1957. Oliver, Edinburgh, 16s.

Tropical agriculture, Oct. 1958, p.316. 1 p.

"The fourth edition of this standard work is disappointing. The author has set about his task of revision mainly by the addition of an extra chapter to the text, labelled 'Review'. This chapter makes difficult reading, and one feels that most of the information contained therein could, with advantage, have been incorporated into the relevant chapters earlier on in the text . . . The practice of adding such articles on to the end of a reasonably elementary textbook has little to commend it . . . In spite of . . . criticisms, this book . . . remains one of the most readable and most acceptable general texts on the applied aspects of animal breeding." *P. N. W.*

Nokes, M. C.

Radioactivity measuring instruments. 76p. 1958. Heinemann, London, 10s. 6d.

Nuclear power, Nov. 1958, p.564. ⅝ col.

"*Radioactivity Measurement Instruments* is in fact a 'do-it-yourself' and shows how quite sophisticated counting equipment can be built at surprisingly little cost by an enterprising science master with the ability to read a circuit diagram and wield a soldering iron . . . Mr Nokes's aim is limited—the measurement with a reasonable degree of accuracy of beta and gamma activity from low activity sources leading to demonstrations of distance and shielding effects." *W. Caldwell Davidson.*

North, Arthur E. See **Malcolm,** John.

Okerblom, N. O.

Calculations of deformations of welded structures; translated from the Russian by L. C. Ronson and T. A. Churchman. 234p. 1958. H. M. Stationery Office, London, 15s. net.

British welding journal, Oct. 1958, p.480. ⅝ col.

"Originally published in Moscow in 1955, and . . . based on work carried out in Russia over a considerable number of years . . . Commences with a lucid qualitative description of the types of distortion that occur, their significance, and an outline of a general scheme for their determination. This is followed by an exposition of the basic theory for calculating distortions . . . Probably the most interesting part . . . is in the final two chapters, which discuss methods for reducing welding deformations, and the choice of assembly sequences. These give practical guidance which is readily applicable." *G. M. Boyd.*

Platt, Maurice.

Automobile brakes and brake testing. Ed.2. 97p. 1958. Pitman, London, 15s.

Automobile engineer, Oct. 1958, p.396. ⅛ col.

"The author has aimed at presenting a consideration of the fundamental principles of brake mechanisms, as well as the technical information required by automobile engineers and those concerned with servicing. The book has been prepared in such a way that it can be readily understood by readers without specialized technical knowledge."

Raoult, G.

Les ondes centimétriques. 401p. 1958. Masson, Paris, 7300 fr.

British journal of applied physics, Oct. 1958, p.404. ¼ col.

"The literary style is simple and thus can be easily followed by the most casual linguist. The work is more comprehensive than most of its kind . . . Covers all the usual introductory theoretical matters . . . technical subjects . . . and techniques of measurements, etc. There are interesting chapters on optical analogues, radio astronomy and paramagnetic resonance, and, even in the chapter on detectors, an excursion into elementary solid state theory." *J. D. Craggs.*

Reinfeld, Nyles V., & **Vogel,** W. R.

Mathematical programming. 274p. 1958. Prentice-Hall, Englewood Cliffs, N. J., $9.

I/EC, Oct. 1958, p.103 A. 1 col.

"Does an excellent job of describing the techniques and application of Mathematical Programming (M.P.). It is unfortunate, however, that the mathematical details and manipulations are described at such an early stage in the book (Chapter 2). Management personnel, or those for whom it has been intended, will probably close the book at this point and pass it on to their subordinates to study . . . The greatest benefit will probably be derived from the book's use and study as a group effort—whether in a college course or in industrial management training sessions." *Rudolph W. Rutishauser.*

Riegels, F. W.

Aerodynamische Profile. 278p. 1958. Oldenbourg, Munich, Germany, DM 138.

Journal of the Royal Aeronautical Society, Oct. 1958, p.764. 1 col.

"Presents experimental results for the past 30 years, including German results hitherto unpublished and relevant non-German data. The information is well selected and essential data are tabulated, with derivations; other data are presented in the form of diagrams. Each of the ten chapters . . . gives a list of literature on the subject considered, without classified reference." *E. S. Krauss.*

Riordan, John.

Introduction to combinatorial analysis. 244p. 1958. Wiley, New York, $8.50.

Journal of the Association for Computing Machinery, Oct. 1958, p.389. ⅝ p.

"Presents modern elementary combinatorial analysis in an accurate and clear manner and makes some attempt at a unification of methods . . . Extraordinarily well written . . . and is lucid and understandable throughout . . . Should become a standard text and reference book in this subject . . . Should be of especial interest to anyone with a 'practical' combinatorial problem to solve." *Morris Newman.*

Rolf, E. R.

Der Kontactumformer. 549p. Springer, Berlin, DM 67.50.

Electrical journal, Oct. 24, 1958, p.1167. ⅝ col.

"About 20 years ago, the first successful high-power contact convertors were built in Germany. They were not developed greatly during war-time, but in the last few years a great deal of development has gone on. Despite this, there is comparatively little published on the subject and nothing in book form. The present work, therefore, is timely and useful . . . It is probable that this book will be the standard work of reference on contact convertors for many years, and an English translation of it would be highly desirable." *G. S. B.*

Roper, Francis Daniel.

Cores and coremaking. 125p. 1958. Allen & Unwin, London, 21s. net.

British foundryman, Oct. 1958, p.540. 9 l.

"A concise and comprehensive study of coremaking practice, dealing both with basic principles and the finer points of the art of coremaking. Each stage in the production of cores is dealt with in detail, up to the final dressing stage. Binding agents, the CO_2 process and shell cores are also covered, together with core blowing and the technique of core assembly . . . Written with the craft apprentice and foundry student in mind, but it should also be of much value to the practical foundryman."

Foundry, Nov. 1958, p.144. ⅛ col.

"Concerned not only with the basic principles of core making but also with the various steps of the operation. These steps range from sand mixing to core drying, dressing, and assembling. Core blowing, shell cores, and the CO_2 process are discussed briefly."

Rose, W. N.

Mathematics for engineers. Ed.5. pt.2. 416p. 1958. Chapman & H., London, 25s.

Engineers' digest, Oct. 1958, p.468. ⅛ col.

"This new edition of Part II . . . in conjunction with Part I (the 9th edition of which was issued in 1955) . . . forms a most comprehensive and practical treatise on the subject. In short, it is a valuable reference work, embracing all the mathematics needed by practical engineers and by students in all branches of engineering . . . Certain additions and alterations have been made, and a few new exercises have been included, though the general plan . . . is exactly the same as in previous editions."

Rosen, George.

History of public health. 551p. 1958. MD Publications, New York, $5.75.

Science, Oct. 31, 1958, p.1080. 4 col.

"This inexpensive and highly readable book can be recommended to all medical students and should be required reading for all students and practitioners of public health. In this era, when great numbers of our lay people read good literature, including scientific books, Rosen's *History* should be an item for their attention . . . Will, without doubt, take its place among the outstanding science histories of the times." *Leland W. Parr.*

Rothstein, Jerome.

Communication, organization and science. 206p. 1958. Falcon's Wing Press, Indian Hills, Colo., $3.50.

Physics today, Oct. 1958, p.40, 42. ⅝ col.

"The author brings together material he has presented at society meetings and in various journals on certain aspects of cybernetics, with special reference to the relation between information and organization. The book is unfortunately not well organized and gives the impression of being a series of rather disconnected essays put together with not sufficient concern for the logical development of the ideas. The style and level of difficulty are very uneven." *R. Bruce Lindsay.*

Rubber Manufacturers Association, Incorporated.

Rubber handbook; specifications for rubber products. 52p. 1958. The Association, 444 Madison Ave., New York, $1.

ASTM bulletin, Oct. 1958, p.80. ⅛ col.

"Designed primarily to aid the engineering and purchasing departments of the industry's customers in improving specifications for their rubber component requirements . . . Will enable the manufacturer to determine more exactly what is actually described on the customer's drawings in terms of product tolerances, performance, and service characteristics."

Runge, W. T. See **Korshenewsky,** N. V., & **Runge,** W. T., ed.

Salvato, Joseph A., jr.

Environmental sanitation. 673p. 1958. Wiley, New York, $12.

Engineering news-record, Oct. 16, 1958, p.127. ⅛ col.

"Covers the field of public health sanitation and is written more for the rural and suburban environment than for larger communities. A particular effort was made to include design, construction, maintenance and operation of smaller plants . . . Subjects covered include communicable diseases, water supply, sewage, swimming facilities, food and milk, pest control, housing and health department organization."

Public works, Nov. 1958, p.20. ½ col.

"An excellent book, well written and covering a great many of the areas in which local public health problems arise. There is, of course, a vast difference between the headquarters operation of a large city or county health department and its field application. This book will help both, as it is practical and based on a lot of realistic first-hand experience."

Water works engineering, Oct. 1958, p.962. ⅛ col.

"This comprehensive book emphasizes the practical application of sanitary and public health engineering theory and principles to the smaller communities, and installations or facilities serving 1,000 to 5,000 persons. The author . . . has bridged the gap between classroom theory and its application to conditions actually encountered in the field. Design, construction, maintenance and operation details of small plants and structures are included. Examples and drawings have been used extensively."

Sauer, E.

Chemie und Fabrikation der tierischen Leime und der Gelatine. 335p. 1958. Springer, Berlin, 69s. 3d.

Chemical age, Oct. 18, 1958, p.650. ½ col.

"Provides everything which the technologist requires about animal adhesives, presented in a systematic manner with typical German thoroughness . . . Generously illustrated with photographs and excellent diagrams . . . Can be warmly recommended to all engaged in this aspect of chemical technology." *A. R. Pinder.*

Saunders, T. F. See **Naylor, John L., & Saunders, T. F., ed.**

Schwenk, J. Rae, & Martin, R. M.

Basic principles of chemistry. 400p. 1958. Prentice-Hall, Englewood Cliffs, N. J., $6.75.

Journal of chemical education, Oct. 1958, p.529. ⅞ col.

"A rather unique presentation of chemistry for above average college students. Although it assumes a rather extensive background in high school chemistry, it is well-written in a clear and understanding way. If students do not have an adequate background, the book should be accompanied by other elementary texts; instructors could easily assign selected readings . . . Every instructor looking for a text that will stimulate and inspire students to original, creative thinking should consider this text." *Carl Weatherbee.*

Sinclair, John.

Environmental conditions in coal mines. 341p. 1958. Pitman, London, 50s.

Bulletin of the Institution of Mining and Metallurgy, Nov. 1958, p.ix. 2 col.

"A criticism which can quite legitimately be levelled at this book, is that there are very few references and some of these are so abbreviated as to be difficult to recognize or make use of . . . The book as it stands is a very good introduction to environmental conditions in coal mines, but I think for university courses it needs amplification in parts . . . Contains much useful information and can be recommended." *F. B. Hinsley.*

Colliery guardian, Oct. 23, 1958, p.512. ⅝ col.

"Prof. Sinclair's latest volume . . . requires half its contents to deal with the vital subject of ventilation . . . The later chapters . . . deal with explosions, fires, rescue, recovery work and first aid. Thus within the covers of a single book the author has drawn together an invaluable mass of vital information for which the student has hitherto had to make extensive search."

Mining magazine, Oct. 1958, p.221. ⅝ col.

"Intended primarily for students of coal mining, although the general exposition is sufficiently complete to be of service to the engineer in practice. With intensive mechanization underground ventilation and dust control assume greater importance than ever, particularly in the light of explosion experiences and pneumoconiosis legislation and this new book obviously fulfils a need."

Solodovnikov, V. V., and others.

Procedure for obtaining transient response from frequency response; translated and edited by A. Gelbtuch. 193p. 1958. Infosearch, London, 42s.

Electronic engineering, Nov. 1958, p.670. ¾ col.

"Presents a development of G. F. Floyd's procedure for determining the transient response of a linear automatic control system from its frequency response . . . The book contains three chapters. The first introduces the theory of the method and the second provides a wide selection of examples illustrating how the method is applied. The third chapter contains over a hundred pages of tables and nomographs to facilitate computation; the nomographs are printed on separate sheets and stored in a pocket at the back of the book." *S. R. Deards.*

Journal of the Institution of Electrical Engineers, Sept. 1958, p.514. ⅔ col.

"Translation into English of a Russian work of 1955 on control-system computations . . . The form of the book is unusual. Two-thirds of its pages are occupied by a set of numerical tables and charts useful in computing the transient responses of linear systems . . . The first third . . . is a concise formal statement of the mathematical basis for the tables, with examples illustrating their use in computation. It is not a textbook in any more general sense."

Spink, Lee K.

Principles and practice of flow meter engineering. Ed.8. 549p. 1958. Foxboro Co., Foxborough, Mass., $15.

Chemical processing, Oct. 1958, p.207. ½ col.

"Written as a textbook, yet arranged so that it can be used as a handbook, eighth edition of L. K. Spink's text . . . covers a much broader scope than earlier editions . . . Covers the entire field of flow measurement, including subjects as history of developments in flowmetering, the theory of flow meters, use and installation of primary devices, meter mechanisms, and liquid, steam and gas flow measuring practice . . . Uses current AGA and ASME terminology. An excellent bibliography provides material for study to satisfy students who wish to delve more deeply into the subject."

Gas journal, Oct. 29, 1958, p.214. ½ col.

"All tables, factors, etc., in the natural gas section are now based on the A.G.A. Report No. 3—the 'Bible' of the natural gas industry. In addition to these revisions a number of new items appear. These include a discussion of meter functions and mechanisms illustrated by simple line sketches of the various types of measuring, controlling and transmitting mechanisms. There is a presentation of data on radius taps, Dall tubes and eccentric, segmental and quadrant edge orifices."

Gas world, Nov. 1, 1958, p.818. ½ col.

"The book may be said to have reached the status of a text book though it still retains its usefulness as a hand book for every day use by practising engineers, particularly those in the oil, chemical and gas industries . . . Arranged in five parts and deals in great detail with every aspect of flow measurement."

Stenzel, Heinrich.

Leitfaden zur Berechnung von Schallvorgängen. Ed.2, revised by O. Brosze. 167p. 1958. Springer, Berlin, DM 31.50.

Journal of the Franklin Institute, Oct. 1958, p.316. ¾ col.

"Starts with the treatment of the far field . . . In the second part . . . the near field is treated . . . In the third section the sound field of a simple and composite spherical sound

source is calculated as well as the disturbance caused by a rigid sphere and a rigid infinite cylinder. The theoretical derivations are limited to the extent necessary for the understanding of the subject with references to the pertinent literature for the one who wants to go deeper into the subject . . . A real help to the sonic engineer and anyone who concerns himself with the subject matter." *Karl Sittel.*

Strong, John.
Concepts of classical optics. 713p. 1958. Freeman, San Francisco, $9.50.

New scientist, Sept. 25, 1958, p.920. ⅔ col.

"The author has taken pains to explain the more difficult parts of his subject and has achieved a greater clarity than is sometimes found. The coverage . . . is too uneven for it to serve alone for a university course in optics but the inclusion of a series of appendices, prepared by specialists, presents the reader with a thoroughly up-to-date picture of some current trends in optical matters. Many of the topics dealt with in this fashion are not readily accessible elsewhere in a form suitable for the student. In some cases, however, the first half of the book gives hardly adequate grounding for an understanding of the appendix material." *O. S. Heavens.*

Physics today, Oct. 1958, p.42, 44, 46. 1⅝ col.

"The sixteen chapters devoted to physical and geometrical optics comprise 368 pages of the book. For each chapter a set of problems is provided . . . Appended to the main part of the book is a group of seventeen articles for which 288 additional pages are required. These articles are by various authors and deal with recent developments in and beyond the fields covered by the classical concepts. Although they are an invitation to the student to venture further into the application of optical methods to various modern problems, yet these articles may be read with profit by oldsters who may have felt that optics has advanced little, if at all, beyond the point reached in their day." *C. C. Kiess.*

Science, Oct. 31, 1958, p.1077. ⅞ col.

"[The author's] flair for practical laboratory procedures shows itself throughout . . . in useful descriptions of ways of testing lenses, selecting and polishing optical materials, and the like . . . One has the impression that the author continually strives to break away from the traditional presentation. In some respects this originality may not make for easy comprehension by the student. The suggested problems will challenge even the brightest." *F. A. Jenkins.*

Sky and telescope, Dec. 1958, p.100. 1 col.

"Appears to be unusually free of errors. The style is less dry than the average text, and the explanations have a lucidity and succinctness not often found together . . . Should serve its designed purpose well, and certainly merits inclusion as a reference work in the advanced amateur telescope maker's library." *H. H. Selby.*

Taylor, Eric Openshaw, ed.
Nuclear reactors for power generation. 144p. 1958. Philosophical Library, New York, $7.50.

Atomic world, Nov. 1958, p.399. ¾ col.

"Large design staffs . . . have been trained in the new techniques: but there remains, to a large extent, the training of technician-grade staff for operational duties. Colleges will play an important role in this field, and the book under review is a summary of this type of lecture course . . . Should prove to be quite readable, by engineers faced with the need to become acquainted with the particular problems and features of nuclear power stations."

Nuclear engineering, Nov. 1958, p.506. ⅝ col.

"The book does not . . . live up to the promise of its title, in that it is not sufficiently practical. The chapter on physical basis of design, for example, is excellent so far as it goes, but it does not go nearly far enough, no attempt being made to provide a chapter on the practical aspects or optimization of a design. One gets, in fact, the impression of a book that has been too long in production. Had it appeared, say, two years ago, it would have been of real value; it can still do good service for students requiring a skeleton introduction to the subject."

Termier, Henri, & **Termier,** Geneviève.
Geological drama. 144p. 1958. Hutchinson, London, 25s.

New scientist, Sept. 25, 1958, p.918. 1 col.

"Original writing fresh from a wealth of encylopaedic [sic] research. The specialist, who can supply his own detail and assess the evidence necessary to support some of the opinions expressed, will find this of great interest in giving the Termiers' own views on many of the critical problems of geology and may be regarded as a prologue as well as an epilogue to their larger volumes. For the general reader, to whom this book is also addressed, there is little to help distinguish between the generally accepted theory and the controversial hypothesis. While little space is devoted to definitions or to argument from evidence there is a most refreshing indication of the scope of geological science . . . This reviewer is not impressed with the overall fruits of so much labour as a certain discrimination and critical discussion seems to be lacking." *W. B. Harland.*

Titchmarsh, E. C.
Eigenfunction expansions associated with second-order differential equations. pt.2. 404p. 1958. Oxford, New York, $11.20.

Physics today, Oct. 1958, p.34, 36. 1 col.

"The author states that his work resulted from an attempt to understand those parts of quantum mechanics which can be regarded as exercises in analysis and that the presentation is aimed at mathematicians and not at physicists. Nevertheless, any physicist who has much contact with eigenvalue problems will find that major portions of the book . . . will repay careful study. All the more so since the book contains extended discussion of important equations including the hydrogen atom, the Stark effect, the helium atom, and variations of the harmonic oscillator . . . Contains a comprehensive bibliography and the typography is excellent throughout." *T. Teichmann.*

Trelease, Sam F.
How to write scientific and technical papers. Ed.3. 185p. 1958. Williams & Wilkins, Baltimore, $3.25.

Automobile engineer, Oct. 1958, p.396. ⅝ col.

"This book . . . is welcome as a medium

through which all who have occasion to express themselves in writing may gain a good knowledge of the basic technique of doing so . . . No attempt has been made in the work to include rules of grammar and rhetoric, although reminders are given concerning a few of them . . . Should be invaluable not only to those who write for publication, but also to those who have to prepare reports of a technical nature."

Vagramyan, A. T., & Solovieva, Z. A.
Le dépôt électrolytique des métaux. 220p. 1958. Dunod, Paris, 2450 fr.

Proceedings of the Physical Society, Oct. 1, 1958, p.681. ½ p.

"The gap between the practising electrodepositor and the electrochemist or metal physicist remains wide. This book lies in that gap but cannot be said to fill it. Since there is virtually no discussion of the theory of the deposition process itself, the approach is mainly from the practical side. The authors give full descriptions of techniques developed in their own laboratory for the study of the properties of metal deposits such as brightness, durability, internal stress, adherence, and amount of occluded hydrogen . . . All the references to the original papers have been omitted." *R. Parsons.*

Villee, Claude A., and others.
General zoology. 877p. 1958. Saunders, Philadelphia, $7.50.

Science, Oct. 17, 1958, p.893. 1⅛ col. including another review.

"Each subject is analyzed from simple to complex, eventually reaching the recognizable organism. General considerations, including such details as the glycolytic cycle, meiosis, extraembryonic membranes, and morphogenesis, occupy the initial 147 pages, and animals, as such, are not introduced until page 148. Each group is handled in relation to a described type, with the frog as the central vertebrate. In consequence, many anatomical and physiological features are given triple consideration . . . Should appeal to the dedicated, technical zoologist for whom the living animal as a going concern means less than the problems involved in its physical and chemical operation." *Lorus J. Milne & Margery Milne.*

Wake, William C.
Analysis of rubber and rubber-like polymers. 237p. 1958. Maclaren, London, 50s.

Industrial chemist, Oct. 1958, p.574. 1¼ col.

"Mainly concerned with the analysis of natural and synthetic rubbers, but plastics such as polyethylene, p.v.c., p.v.d.c., p.v.a., and polyurethanes are also discussed . . . On reading the book, one gets a general feeling that it has been put together too hurriedly and that a little more time spent on the preparation would have greatly improved it. However, bearing in mind the fact that its scope is confined to one field of applied analysis, the reviewer has little doubt that it will be of considerable value to all interested in the analysis of rubber." *William I. Stephen.*

Washtell, C. C. H.
Radiation counters and detectors. 115p. Newnes, London, 21s.

Instrument review, Oct. 28, 1958, p.1063. ⅜ col.

"An introduction to radioactive detectors and measurement techniques for readers who possess only a general scientific education . . . Consists of seven chapters, the first of which is historical . . . This chapter is followed by others on the atom structure radiation detectors; Geiger-Muller tubes; other types of detector based on ion collection; methods of detection not based on ion collection and dosimetry . . . The book is to be followed by a second book entitled *Nucleonic Instrumentation* which will cover the subject more comprehensively."

Nuclear engineering, Nov. 1958, p.506. ⅜ col.

"Will be welcomed by those who are searching for the basic principles and general background of the subject, such as those working with isotopes for the first time . . . The treatment throughout is simple and straightforward without the mathematical treatment which, however valuable it may be to the advanced technologist, usually succeeds in confusing the type of reader which the author has in mind."

Wilson, C. G.
Electricity and magnetism. 538p. 1958. English Universities Press, London, 21s.

Journal of the Institution of Electrical Engineers, Sept. 1958, p.515. ⅔ col.

"Aims to meet the needs of students taking the advanced and scholarship level examination in physics of the General Certificate of Education and of those students preparing for open scholarships to the universities . . . Following the introduction, the treatment proceeds with electric currents, circuits, thermal and electrolytic phenomena, electromagnetic induction, alternating currents and circuits, generators and motors, electron physics, X-rays, radioactivity and atomic structure, and nuclear physics. The whole represents a well balanced and generally modern treatment."

Wolfendale, Eric, ed.
Junction transistor and its applications. 394p. 1958. Macmillan, New York, $7.50.

Electronic equipment engineering, Nov. 1958, p.90. ⅓ col.

"The opening chapter gives a complete account of the physics of p-n and p-n-p structures and is intended for the experienced circuit designer. All of the remaining chapters are concerned with the design of circuits around the transistor, covering all devices readily available up to mid-1957, and provides information to enable the designer to make the maximum use of their outstanding properties."

Engineer, Oct. 24, 1958, p.646. 2 col.

"A collection of papers written by a team of physicists and engineers of the Mullard Company, with several years' experience in the field of semi-conductors . . . Intended for engineers, physicists and students as a comprehensive introduction to the junction transistor and its applications . . . Mostly well written and laid out . . . The most comprehensive book of British origin in this field and in price and most of the subject matter compares favorably with the best of similar American books."

Wookey, N. See **Mason, P., & Wookey, N., ed.**

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